

# CLAIMS

1. Device for connecting the previously intubed ends of a body duct (12) and a prosthesis (10) of an essentially tubular shape, characterized by its being composed of a sleeve of mesh (16) or analogous material, deformable by the use of a balloon catheter and capable of radial expansion between a stable minimal-diameter configuration and a final after-expansion configuration that is also stable, said sleeve (16) being equipped on each end with a series of fixation barbs (22) for the portions covered by the sleeve, aligned at regular intervals, and encircling it radially. Said barbs present a hemostatic profile comprised of a circular base section (32) extending to a trihedral-shaped end portion (34).
2. Device according to Claim 1, characterized in that the expandable sleeve (16) is comprised of an openwork steel cylinder with diamond-shaped cutouts (20) and barbs (22, 22') that are attached and fixed by soldering or gluing at the intersections of the sides of said diamond shapes (20).
3. Device according to Claim 1 or 2, characterized in that the portion beyond the ends of the sleeve (16) is also provided with fixation barbs (22').
4. Device according to one of Claims 1 to 3 characterized in that said sleeve (16) is capable of expanding during fixation in a diameter ratio [based] on an initial diameter greater than 2.
5. Device according to one of Claims 1 to 4 characterized in that the ring of barbs (22) on the ends of the sleeve (16) are straight and the other barbs (22') are slightly curved with their points (34) oriented toward one end or the other of the sleeve (16) or randomly in any other direction.
6. Device according to Claim 5, characterized in that said barbs (22') have an end portion (34) inclined at an angle of between 0 and 10°, preferably 5°.
7. Device according to one of Claims 1 to 6 characterized in that the barbs (22) of the ends of the sleeve (16) are of reduced height in relation to that of the other barbs (22').

8. Connecting device applied to end-to-end anastomosis of at least two body ducts (12-1, 12-2; 12'-1, 12'-2, 12N-3) through the intermediary of a prosthesis (10, 10') whose extremities are intubed in the end portions of said ducts, characterized by its being composed of a sleeve (16) according to any one of Claims 1 to 7, fitted at each end of the  
5 prosthesis (10, 10') of the intubed portions.

9. Procedure for setting in place connecting devices according to Claim 8 characterized in that a first end of the prosthesis (10, 10') is intubed in the extremity of a first body duct (12-1; 12'-1), a first connecting device (14-1, 14'-1) is set in place by using  
10 an inflatable balloon (36) catheter (38) introduced into the prosthesis (10, 10') through one end or the other, then the other end or ends of the prosthesis (10, 10') are intubed in the other duct (12-2) or ducts (12'-2, 12'-3) and finally, the second connecting device (14-2) or the second and third connecting devices (14'-2, 14'-3) are set in place using said catheter (38) introduced into the prosthesis (10, 10') through the orifice (40, 40'), arranged  
15 in said prosthesis and then re-closed.